

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner
 US Department of Commerce
 United States Patent and Trademark
 Office, PCT
 2011 South Clark Place Room
 CP2/5C24
 Arlington, VA 22202
 ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing (day/month/year) 01 February 2001 (01.02.01)	
International application No. PCT/SE00/01152	Applicant's or agent's file reference 2001489
International filing date (day/month/year) 02 June 2000 (02.06.00)	Priority date (day/month/year) 03 June 1999 (03.06.99)
Applicant SKARPING, Gunnar et al	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:

12 December 2000 (12.12.00)

☐ in a notice effecting later election filed with the International Bureau on:2. The election ☒ was☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer R. E. Stoffel Telephone No.: (41-22) 338.83.38
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INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 00/01152

A. CLASSIFICATION OF SUBJECT MATTER

IPC7: G01N 1/22, G01N 1/28

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: G01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4381408 A (DAVID P. ROUNBEHLER ET AL), 26 April 1983 (26.04.83), column 1, line 64 - column 2, line 44 --	1-17,19-22
A	US 5242836 A (ALOIS RUSE), 7 Sept 1993 (07.09.93), column 1, line 66 - column 2, line 55 --	1-17,19-22
A	SU 1724305 A1 (AS UKR SURFACE CHEM INST) 1992-04-07 (abstract) World Patents Index (online). London, U.K.: Derwent Publications, Ltd. (retrieved on 2000-04-04). Retrieved from: EPO WPI Database. DW199311, Accession No. 1993-091795 --	18

☒ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

20 November 2000

Date of mailing of the international search report

22 -11- 2000

Name and mailing address of the ISA/

Swedish Patent Office

Box 5055, S-102 42 STOCKHOLM

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Authorized officer

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 00/01152

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 3533750 A (JON W. BELISLE), 13 October 1970 (13.10.70), abstract -- -----	18

INTERNATIONAL SEARCH REPORT

International application No.
PCT/SE00/01152

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

See extra sheet.

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/SE00/01152

The claims relate to one invention according to claims 1-17 and 19-22 and to one invention according to claim 18.

The first invention relates to a sampling device to analyze a substance including both a gas and a particle phase in an air stream, a kit comprising several sampling devices and a method for sampling, employing the sampling device. The special technical features of the invention are an adsorption device, a filter device, a reagent container and a switching device. The adsorption device and the filter device are coated with a mixture of amines and a carboxylic acid.

The second invention relates to a method for immobilising volatile amines on a surface. The invention is characterized by coating a surface with a mixture of volatile amines and a carboxylic acid. The method is not particularly adapted for sampling by use of the sampling device according to claim 1. The only technical features common to the first and second invention are a mixture of amines and carboxylic acid and that this mixture forms a coating. These features can not be considered to define a contribution over the prior art. The special technical features of the second invention are not corresponding to the technical features of the first invention.

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/SE 00/01152

US	4381408	A	26/04/83	DE	3028324 A	09/04/81
				GB	2056304 A,B	18/03/81
				JP	56039461 A	15/04/81
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US	5242836	A	07/09/93	DE	4114468 C	10/12/92
				EP	0512237 A	11/11/92
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US	3533750	A	13/10/70	NONE		
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PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

REC'D 10 OCT 2001

WIPO

PCT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference PC-2001489	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/SE00/01152	International filing date (day/month/year) 02.06.2000	Priority date (day/month/year) 03.06.1999
International Patent Classification (IPC) or national classification and IPC ⁷ G01N 1/22, G01N 1/28		
Applicant PROVTAGAREN AB et al		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 3 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of _____ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 12.12.2000	Date of completion of this report 27.09.2001
Name and mailing address of the IPEA/SE Patent- och registreringsverket Box 5055 S-102 42 STOCKHOLM Facsimile No. 08-667 72 88	Authorized officer Ulla Granlund/MP Telephone No. 08-782 25 00

Form PCT/IPEA/409 (cover sheet) (January 1998)

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/SE00/01152

I. Basis of the report

1. With regard to the **elements** of the international application:*

- ☒ the international application as originally filed
- ☐ the description:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the claims:
pages _____, as originally filed
pages _____, as amended (together with any statement) under article 19
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the drawings:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheet/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2 (c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item I and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/SE00/01152

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

Novelty (N)	Claims	<u>1-22</u>	YES
	Claims		NO
Inventive step (IS)	Claims	<u>1-22</u>	YES
	Claims		NO
Industrial applicability (IA)	Claims	<u>1-22</u>	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

Cited documents

- | | |
|---------------|-----------------------------|
| 1. US 4381408 | (David P. Rounbehler et al) |
| 2. US 5242836 | (Alois Ruse) |
| 3. SU 1724305 | (Ukr Surface Chem Inst) |
| 4. US 3533750 | (Jon W. Belisle) |

The documents cited in the International Search Report represents background art. The invention defined in claims 1-22 is not disclosed by any of these documents. None of the cited documents gives any indication towards the claimed sampling device, kit comprising a plurality of sampling devices, method for immobilizing amines or method for taking samples. No relevant combination of the cited documents would lead a person skilled in the art to the invention defined in the claims.

Therefore, the invention defined in claims 1-22 is novel and is considered to involve an inventive step. It is also considered to be industrially applicable.

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Dat
14 December 2000 (14.12.2000)

PCT

(10) International Publication Number
WO 00/75622 A1

(51) International Patent Classification⁷: G01N 1/22, 1/28

(21) International Application Number: PCT/SE00/01152

(22) International Filing Date: 2 June 2000 (02.06.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
9902089-3 3 June 1999 (03.06.1999) SE
60/138,053 8 June 1999 (08.06.1999) US

(71) Applicant (for all designated States except US): PROV-TAGAREN AB [SE/SE]; Stenåldersvägen 17, S-226 54 Lund (SE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): SKARPING, Gunnar [SE/SE]; Stenåldersvägen 17, S-226 54 Lund (SE). DALENE, Marianne [NO/SE]; Stenåldersvägen 17, S-226 54 Lund (SE).

(74) Agent: AWAPATENT AB; Box 5117, S-200 71 Malmö (SE).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AT (utility model), AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, CZ (utility model), DE, DE (utility model), DK, DK (utility model), DM, DZ, EE, EE (utility model), ES, FI, FI (utility model), GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KR (utility model), KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK (utility model), SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:

- With international search report.
- Before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments.

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: SAMPLING DEVICE

(57) Abstract: A sampling device is described for analysis of a substance, which is selected from the group consisting of isocyanates, aminoisocyanates, isothiocyanates, amines and carboxylic acids and which is present in both gas and particle phase in an air flow intended to pass through the sampling device, which comprises a) an adsorption device (1) intended for the passage of the air flow and provided with a coating of a mixture of a reagent in the form of primary or secondary amines and a carboxylic acid for adsorption of and reaction with the substance in the gas phase of the air flow, b) a filter device (2) intended for the passage of the air flow and provided with the mixture of reagent and carboxylic acid for the adsorption of and reaction with the substance in the particle phase of the air flow, and c) a reagent container (4) containing the reagent, the reagent container (4) being connected to the adsorption device (1) and/or the filter device (2) by means of a switch device (5) for conveying the reagent to these for reaction therein with the non-reacted substance.